

Title (en)  
DETERMINISTIC MULTIPROCESSING

Title (de)  
DETERMINISTISCHE MEHRFACHVERARBEITUNG

Title (fr)  
MULTITRAITEMENT DÉTERMINISTE

Publication  
**EP 2232367 A4 20110309 (EN)**

Application  
**EP 08858537 A 20081212**

Priority  
• US 2008086711 W 20081212  
• US 1301907 P 20071212

Abstract (en)  
[origin: WO2009076654A1] A hardware and/or software facility for controlling the order of operations performed by threads of a multithreaded application on a multiprocessing system is provided. The facility may serialize or selectively-serialize execution of the multithreaded application such that, given the same input to the multithreaded application, the multiprocessing system deterministically interleaves operations, thereby producing the same output each time the multithreaded application is executed. The facility divides the execution of the multithreaded application code into two or more quantum specifying a deterministic number of operations, and the facility specifies a deterministic order in which the threads execute the two or more quantum. The facility may operate together with a transactional memory system. When the facility operates together with a transactional memory system, each quantum is encapsulated in a transaction that, may be executed concurrently with other transactions, and is committed according to the specified deterministic order.

IPC 8 full level  
**G06F 9/46** (2006.01)

CPC (source: EP US)  
**G06F 9/463** (2013.01 - EP US); **G06F 9/466** (2013.01 - EP US); **G06F 9/52** (2013.01 - EP US); **G06F 9/522** (2013.01 - EP US);  
**G06F 9/544** (2013.01 - EP US)

Citation (search report)  
• [X1] US 2003069920 A1 20030410 - MELVIN STEPHEN W [US], et al  
• [I] WO 2007056597 A1 20070518 - HEWLETT PACKARD DEVELOPMENT CO [US], et al  
• See references of WO 2009076654A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2009076654 A1 20090618**; EP 2232367 A1 20100929; EP 2232367 A4 20110309; JP 2011507112 A 20110303; JP 5576798 B2 20140820;  
US 2009165006 A1 20090625; US 8694997 B2 20140408

DOCDB simple family (application)  
**US 2008086711 W 20081212**; EP 08858537 A 20081212; JP 2010538213 A 20081212; US 33433608 A 20081212